

CEREBRAL PALSY: A COMMON NEUROLOGICAL DISORDER

Cerebral palsy (CP) is a term for a group of neurological disorders that permanently affect body movement, muscle coordination, posture and balance.¹ CP is caused by abnormal development of the brain or damage to the brain that affects a child's ability to control his or her muscles. The brain damage that leads to CP can happen before or during birth (called congenital CP), within a month after birth, or during the first years of a child's life while the brain is still developing.² Many children in the U.S. diagnosed with cerebral palsy are impacted by spasticity.³

RISK FACTORS

Some of the risk factors for congenital CP include, but are not limited to²:



Low birthweight
(less than 5.5 pounds)



Premature birth
(born before the 37th week of pregnancy)



Multiple births
(especially if a baby's twin or triplet dies before or shortly after birth)



Use of infertility treatments by the mother



Infections during pregnancy

NEED TO KNOW FACTS ABOUT CP

CP is the most common motor disability in children in the U.S.³



10,000
Children born annually who will develop CP⁴

SYMPTOMS

Some children with CP typically have problems with movement and posture due to abnormal muscle tone.⁵ Symptoms can vary greatly from person to person, ranging from mild to severe.



Children with CP have a variety of symptoms. Spasticity – stiff or tight muscles and exaggerated reflexes – is one of them.⁵ Many children in the U.S. diagnosed with cerebral palsy are impacted by spasticity.³

TYPES OF SPASTIC CEREBRAL PALSY

- **Spastic hemiplegia/hemiparesis** usually affects the arm, hand, and leg on one side of the body.⁵
- **Spastic diplegia/diparesis** involves muscle stiffness that is mostly in the legs. The arms can also be affected but usually to a lesser extent.⁵
- **Spastic quadriplegia/quadruparesis** is a severe form of CP. It is caused by significant damage to the brain or brain malformations.⁵
- **Spastic monoplegia** is a rare form of CP involving one limb.⁶
- **Spastic paraplegia** involves only the legs.⁶
- **Spastic triplegia** involves three extremities, usually both legs and one arm. This may represent hemiplegia plus paraplegia, or incomplete triplegia.⁶

Common symptoms of CP besides spasticity also include:¹

- Lack of muscle coordination when performing voluntary movements (ataxia)
- Walking with one foot or leg dragging
- Walking on the toes, with a crouched or a "scissored" gait
- Stiff or floppy muscle tone
- Other neurological symptoms such as seizures, hearing loss, impaired vision, bladder and bowel control issues, and pain and abnormal sensations



Associated Conditions



Seizures
(1 in 4)⁷



Pain
(3 in 4)⁷



Blindness
(1 in 10)⁷



Hearing impairment ranging from mild impairment to bilateral deafness
(1 in 25)⁷



Intellectual disability
(1 in 2)⁷



Bladder and bowel control issues
(1 in 4)⁷

CHRONIC LIFELONG MEDICAL CONDITION

CP is a lifelong chronic condition, and the symptoms can change over a person's lifetime.¹

CP IS TYPICALLY DIAGNOSED BY:⁸



- Tracking growth and development over time
- Developmental screening tests for motor or movement delays, such as interviews or questionnaires completed by parents, or tests that the doctor gives to the child
- Brain imaging (CT scan, MRI)

Early Diagnosis Difficult⁹



- Most babies with CP don't show definite signs of abnormality.
- It is often impossible to diagnose CP under the age of four months and even under six months of age in slightly affected children.

THE GROSS MOTOR FUNCTIONING CLASSIFICATION SYSTEM FOR CP

A five-level classification system describes the gross motor function of children with CP based on their self-initiated movement, with particular emphasis on sitting, walking and wheeled mobility. The description of the five levels is broad and not intended to describe the function of individual children.¹⁰

Level 1

- Walks without restrictions: limitations in more advanced gross motor skills.

Level 4

- Self-mobility with limitations: children are transported or use power mobility outdoors and in the community.

Level 2

- Walks without assistive devices: limitations walking outdoors in the community.

Level 5

- Self-mobility is severely limited even with the use of assistive technology.

Level 3

- Walks with assistive mobility devices: limitations walking outdoors in the community.



Management/Treatment of CP

While there is no cure for CP, there are treatments available that can improve symptoms of spasticity. These include¹:

- Anti-spasticity oral medications
- Botulinum toxin injections
- Surgery
- Braces
- Physical, occupational, and speech therapy



ECONOMIC IMPACT OF CP

Nearly \$1 million³

Estimated lifetime cost to care for someone with CP

\$11.5 billion³

Estimated combined lifetime costs for those with CP born in 2000 (direct and indirect costs)

10 Times Higher³

Medical costs for children with CP compared to children without CP or intellectual disability

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